ABSTRACT

A semiconductor device is provided that includes a gate oxide film provided on an n-type silicon substrate, a gate electrode provided on the gate oxide film, and a source region and a drain region formed in the silicon substrate at two sides of the gate electrode. The source and the drain regions are composed of P^- layers provided in the silicon substrate along the two sides of the gate electrode by introducing B^+ ions, and P^+ layers provided in the P^- layers of the silicon substrate at the sides spaced apart from the gate electrode. The P^+ layers are in contact with the respective P^- layers. In addition, N^+ ions for suppressing the diffusion of the B^+ ions into the silicon substrate are introduced in the P^- layers.